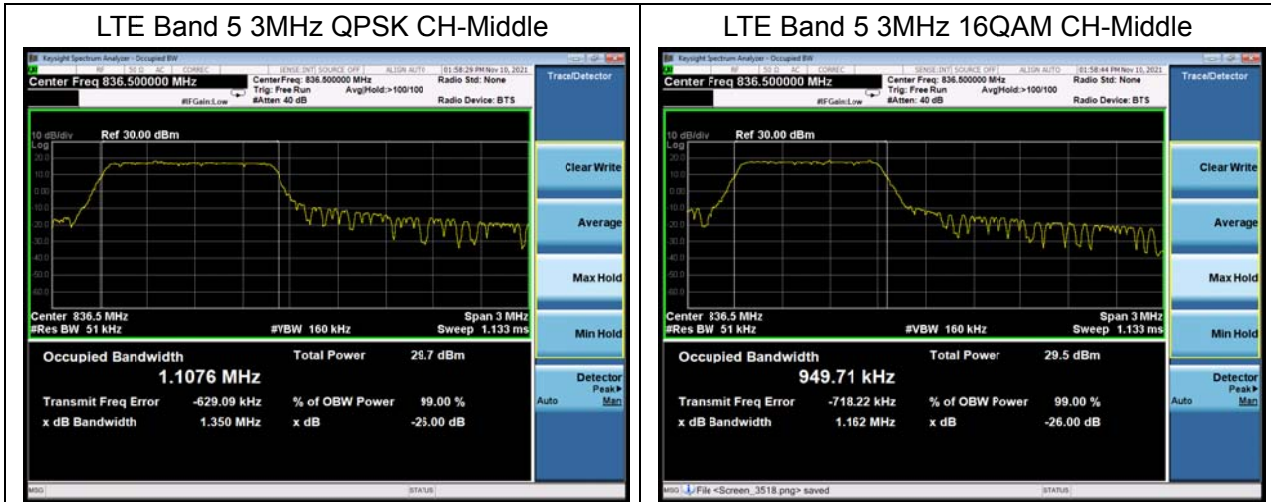


RF Power Output and Effective Radiated Power

Band5	Channel/ Frequency(MHz)	Index	RB# RBstart QPSK	RB# RBstart 16QAM	Conducted Power (dBm)	
					QPSK	16QAM
1.4MHz	20407/824.7	0	1#0	1#0	23.41	22.95
		0	6#0	5#0	21.44	21.32
	20525/836.5	0	1#0	1#0	23.53	22.59
		0	6#0	5#0	21.22	21.34
	20643/848.3	0	1#5	1#5	23.47	22.46
		0	6#0	5#0	21.15	21.22
3MHz	20415/825.5	0	1#0	1#0	23.72	22.76
		0	6#0	5#0	21.36	21.50
	20525/836.5	0	1#0	1#0	23.27	22.42
		0	6#0	5#0	21.13	21.23
	20635/847.5	1	1#5	1#5	23.48	22.45
		1	6#0	5#0	21.10	21.21
5MHz	20425/826.5	3	1#0	1#0	23.57	23.13
		0	6#0	5#0	22.49	21.32
	20525/836.5	0	1#0	1#0	23.52	22.80
		0	6#0	5#0	22.18	21.40
	20625/846.5	0	1#5	1#5	23.14	22.75
		3	6#0	5#0	22.07	21.29
10MHz	20450/829	3	1#0	1#0	23.41	22.91
		0	4#0	4#0	23.40	22.00
	20525/836.5	0	1#0	1#0	23.67	23.62
		0	4#0	4#0	23.22	22.21
	20600/844	4	1#5	1#5	23.40	22.47
		7	4#2	4#2	23.09	22.11

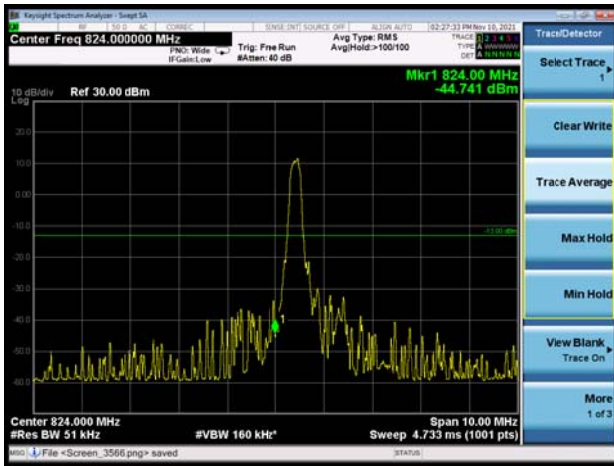
Occupied Bandwidth

Mode	Bandwidth	Modulation	Channel/ Frequency(MHz)	RB	Bandwidth(MHz)	
					99% Power	-26dBc
LTE Band 5	3MHz	QPSK	20525/836.5	6#0	0	1.108
		16QAM	20525/836.5	6#0	0	0.950

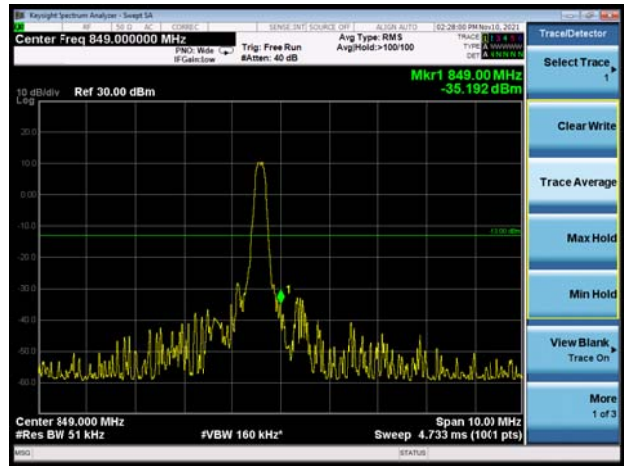


Band Edge Compliance

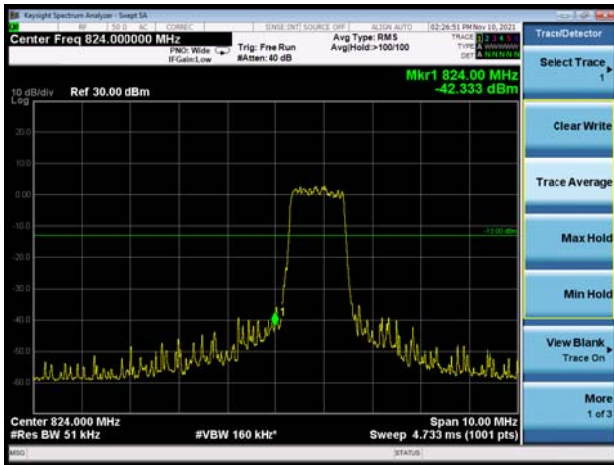
LTE Band 5 3MHz QPSK 1RB CH-Low



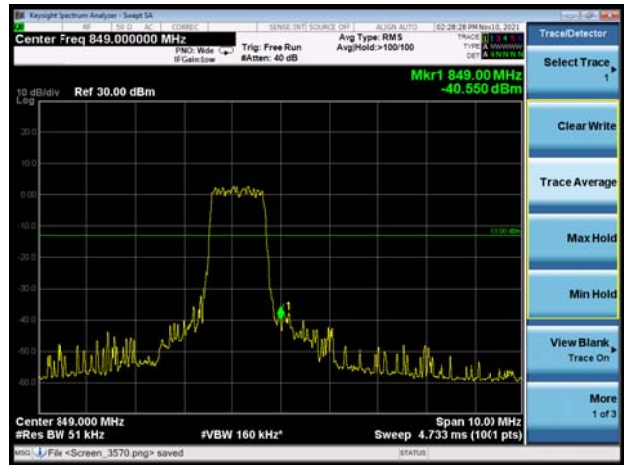
LTE Band 5 3MHz QPSK 1RB CH-High



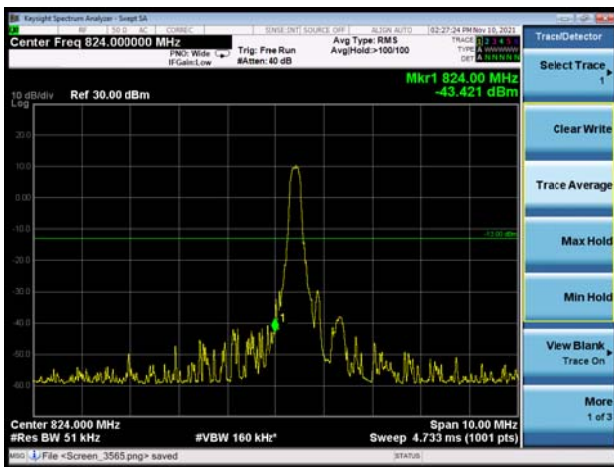
LTE Band 5 3MHz QPSK 100%RB CH-Low



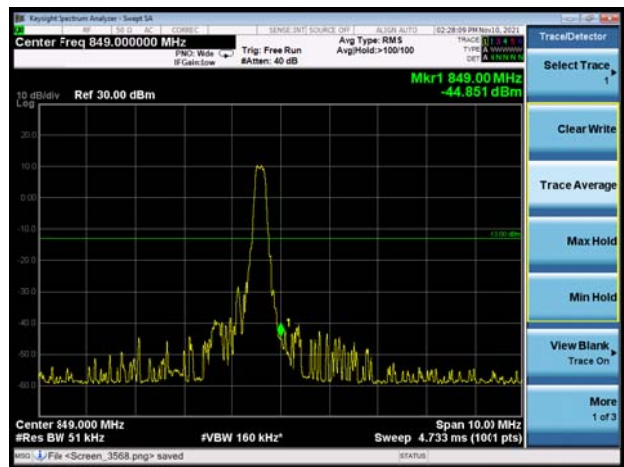
LTE Band 5 3MHz QPSK 100%RB CH-High



LTE Band 5 3MHz 16QAM 1RB CH-Low



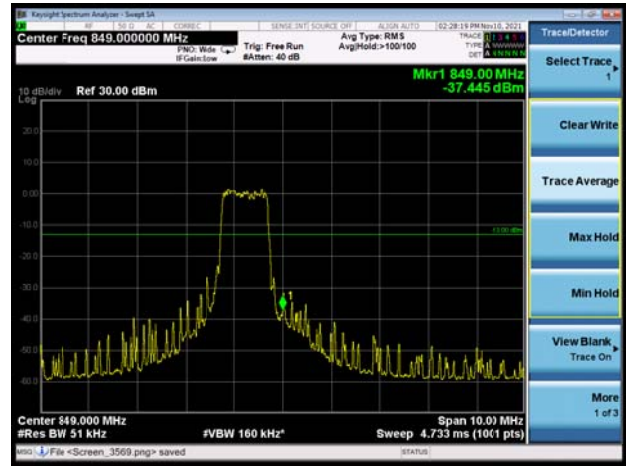
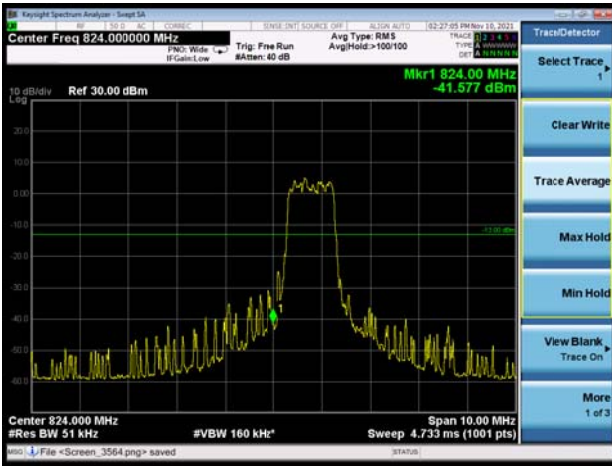
LTE Band 5 3MHz 16QAM 1RB CH-High





LTE Band 5 3MHz 16QAM 100%RB CH-Low

LTE Band 5 3MHz 16QAM 100%RB CH-High



Peak-to-Average Power Ratio (PAPR)

Mode	Bandwidth	Modulation	Channel/ Frequency(MHz)	Peak-to-Average Power Ratio (PAPR)			Limit(dB)	Conclusion
				Peak(dBm)	Avg(dBm)	PAPR(dB)		
LTE Band 5	1.4MHz	QPSK	20525/836.5	25.50	13.64	11.86	≤13	PASS
		16QAM	20525/836.5	26.06	13.58	12.48	≤13	PASS
	3MHz	QPSK	20525/836.5	25.64	15.62	10.02	≤13	PASS
		16QAM	20525/836.5	26.52	15.66	10.86	≤13	PASS
	5MHz	QPSK	20525/836.5	26.62	16.73	9.89	≤13	PASS
		16QAM	20525/836.5	26.59	16.00	10.59	≤13	PASS
	10MHz	QPSK	20525/836.5	26.69	16.78	9.91	≤13	PASS
		16QAM	20525/836.5	27.51	17.31	10.20	≤13	PASS

Frequency Stability

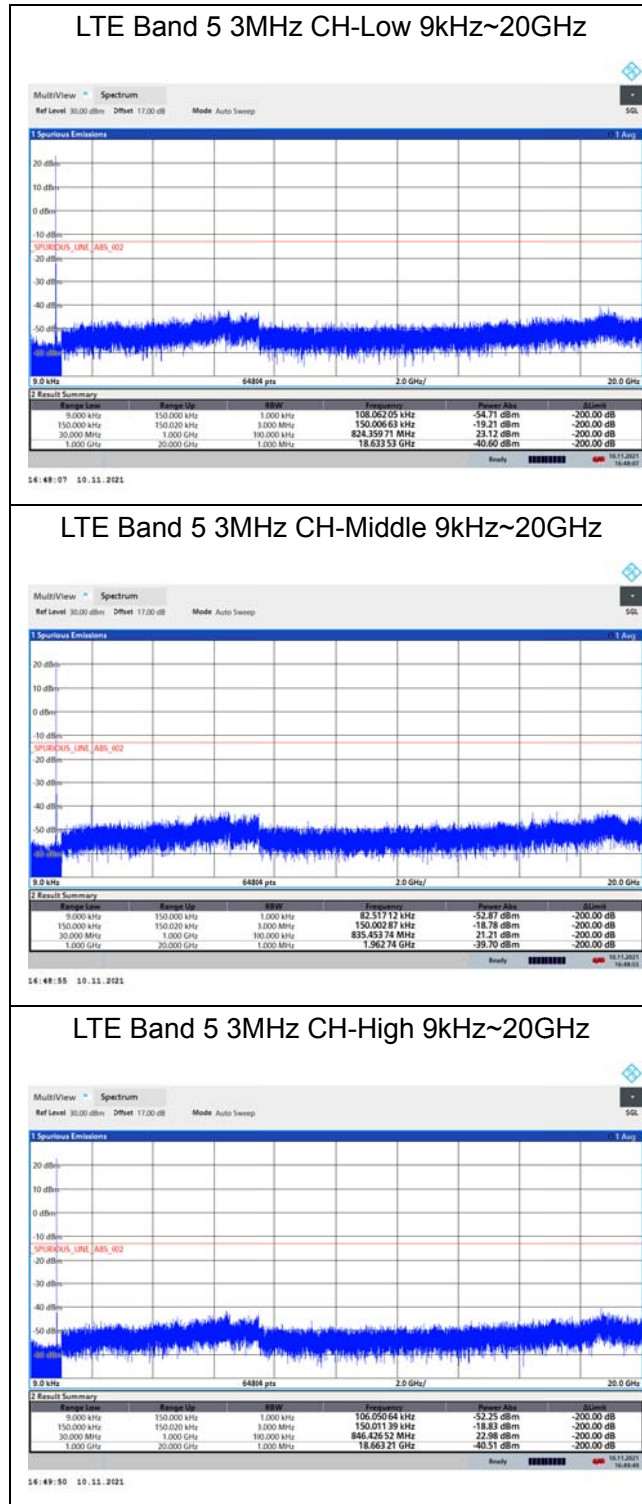
LTE Band 5						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	1.4MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	17.79	10.22	0.02126	0.01222	PASS
Extreme (85°C)		8.59	7.95	0.01027	0.00950	PASS
Extreme (80°C)		8.93	2.33	0.01068	0.00279	PASS
Extreme (70°C)		3.75	5.31	0.00449	0.00634	PASS
Extreme (60°C)		2.88	1.71	0.00344	0.00205	PASS
Extreme (55°C)		14.23	14.00	0.01701	0.01673	PASS
Extreme (50°C)		16.71	8.75	0.01998	0.01046	PASS
Extreme (40°C)		9.84	17.15	0.01176	0.02050	PASS
Extreme (30°C)		17.33	8.95	0.02072	0.01070	PASS
Extreme (20°C)		17.43	14.52	0.02084	0.01736	PASS
Extreme (10°C)		17.30	12.96	0.02068	0.01549	PASS
Extreme (0°C)		11.57	12.78	0.01383	0.01528	PASS
Extreme (-10°C)		6.16	5.71	0.00737	0.00683	PASS
Extreme (-20°C)		3.97	6.97	0.00475	0.00833	PASS
Extreme (-30°C)		6.55	4.93	0.00783	0.00589	PASS
Extreme (-40°C)		17.20	6.70	0.02056	0.00801	PASS
25°C	LV	1.26	7.44	0.00151	0.00889	PASS
	HV	14.94	4.76	0.01787	0.00569	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	3MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	16.41	16.59	0.01961	0.01984	PASS
Extreme (85°C)		17.02	16.67	0.02034	0.01993	PASS
Extreme (80°C)		9.61	11.70	0.01149	0.01399	PASS
Extreme (70°C)		7.92	5.89	0.00946	0.00704	PASS
Extreme (60°C)		15.00	9.00	0.01793	0.01076	PASS
Extreme (55°C)		4.00	6.00	0.00478	0.00717	PASS
Extreme (50°C)		1.00	4.00	0.00120	0.00478	PASS
Extreme (40°C)		11.00	9.00	0.01315	0.01076	PASS
Extreme (30°C)		2.00	10.00	0.00239	0.01195	PASS
Extreme (20°C)		16.38	13.92	0.01959	0.01665	PASS
Extreme (10°C)		9.75	13.58	0.01165	0.01624	PASS
Extreme (0°C)		2.18	5.40	0.00261	0.00646	PASS
Extreme (-10°C)		3.30	12.24	0.00395	0.01463	PASS

Extreme (-20℃)		17.07	17.52	0.02041	0.02094	PASS
Extreme (-30℃)		16.63	2.92	0.01989	0.00350	PASS
Extreme (-40℃)		14.61	14.38	0.01747	0.01719	PASS
25℃	LV	14.56	15.00	0.01741	0.01793	PASS
	HV	16.15	15.92	0.01930	0.01903	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	5MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	3.74	15.13	0.00448	0.01809	PASS
Extreme (85℃)		12.43	7.31	0.01486	0.00874	PASS
Extreme (80℃)		4.57	13.45	0.00546	0.01608	PASS
Extreme (70℃)		17.56	17.31	0.02099	0.02069	PASS
Extreme (60℃)		10.00	4.00	0.01195	0.00478	PASS
Extreme (55℃)		8.00	4.00	0.00956	0.00478	PASS
Extreme (50℃)		14.00	14.00	0.01674	0.01674	PASS
Extreme (40℃)		3.00	4.00	0.00359	0.00478	PASS
Extreme (30℃)		10.00	12.00	0.01195	0.01435	PASS
Extreme (20℃)		7.53	3.41	0.00900	0.00408	PASS
Extreme (10℃)		1.59	11.91	0.00190	0.01424	PASS
Extreme (0℃)		13.64	8.72	0.01631	0.01043	PASS
Extreme (-10℃)		10.14	15.22	0.01212	0.01819	PASS
Extreme (-20℃)		12.31	8.73	0.01471	0.01044	PASS
Extreme (-30℃)		8.54	3.99	0.01021	0.00477	PASS
Extreme (-40℃)		11.33	4.80	0.01354	0.00574	PASS
25℃	LV	5.07	9.59	0.00606	0.01146	PASS
	HV	15.60	15.42	0.01865	0.01843	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	10MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	9.45	17.52	0.01129	0.02094	PASS
Extreme (85℃)		15.77	16.60	0.01886	0.01985	PASS
Extreme (80℃)		7.26	10.52	0.00868	0.01257	PASS
Extreme (70℃)		13.09	1.22	0.01565	0.00146	PASS
Extreme (60℃)		15.00	14.00	0.01793	0.01674	PASS
Extreme (55℃)		12.00	7.00	0.01435	0.00837	PASS
Extreme (50℃)		4.00	15.00	0.00478	0.01793	PASS
Extreme (40℃)		16.00	14.00	0.01913	0.01674	PASS
Extreme (30℃)		12.00	12.00	0.01435	0.01435	PASS
Extreme (20℃)		7.10	12.00	0.00848	0.01435	PASS
Extreme (10℃)		14.15	3.11	0.01692	0.00372	PASS



Extreme (0℃)		3.80	5.71	0.00454	0.00683	PASS
Extreme (-10℃)		12.66	15.01	0.01513	0.01795	PASS
Extreme (-20℃)		2.69	17.01	0.00322	0.02033	PASS
Extreme (-30℃)		15.09	4.79	0.01804	0.00573	PASS
Extreme (-40℃)		3.71	13.55	0.00444	0.01619	PASS
25℃	LV	17.18	2.27	0.02053	0.00272	PASS
	HV	5.42	1.93	0.00648	0.00230	PASS

Spurious Emissions at Antenna Terminals



Radiates Spurious Emission

LTE Band 5 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1672.0	-58.17	2.00	10.75	Horizontal	-51.57	-13.00	38.57	90
3	2508.1	-60.61	2.51	11.05	Horizontal	-54.22	-13.00	41.22	0
4	3346.0	-62.40	4.20	11.15	Horizontal	-57.60	-13.00	44.60	180
5	4182.5	-59.01	5.20	11.15	Horizontal	-55.21	-13.00	42.21	315
6	5019.0	-56.12	5.50	11.95	Horizontal	-51.82	-13.00	38.82	315
7	5855.5	-56.48	5.70	13.55	Horizontal	-50.78	-13.00	37.78	135
8	6692.0	-56.84	6.30	13.75	Horizontal	-51.54	-13.00	38.54	0
9	7528.5	-52.20	6.80	13.85	Horizontal	-47.30	-13.00	34.30	90
10	8365.0	-53.18	6.90	14.25	Horizontal	-47.98	-13.00	34.98	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

LTE Band 5 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1668.6	-58.64	2.00	10.75	Horizontal	-52.04	-13.00	39.04	90
3	2503.3	-59.93	2.51	11.05	Horizontal	-53.54	-13.00	40.54	90
4	3337.5	-61.55	4.20	11.15	Horizontal	-56.75	-13.00	43.75	270
5	4171.9	-58.60	5.20	11.15	Horizontal	-54.80	-13.00	41.80	315
6	5006.3	-55.05	5.50	11.95	Horizontal	-50.75	-13.00	37.75	180
7	5840.6	-55.38	5.70	13.55	Horizontal	-49.68	-13.00	36.68	270
8	6675.0	-56.91	6.30	13.75	Horizontal	-51.61	-13.00	38.61	0
9	7509.4	-52.45	6.80	13.85	Horizontal	-47.55	-13.00	34.55	270
10	8343.8	-52.57	6.90	14.25	Horizontal	-47.37	-13.00	34.37	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

LTE Band 5 10MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1664.4	-62.45	2.00	10.75	Horizontal	-55.85	-13.00	42.85	90
3	2496.6	-58.55	2.51	11.05	Horizontal	-52.16	-13.00	39.16	225
4	3346.0	-62.28	4.20	11.15	Horizontal	-57.48	-13.00	44.48	45
5	4182.5	-58.74	5.20	11.15	Horizontal	-54.94	-13.00	41.94	45
6	5019.0	-55.53	5.50	11.95	Horizontal	-51.23	-13.00	38.23	0
7	5855.5	-56.78	5.70	13.55	Horizontal	-51.08	-13.00	38.08	135
8	6692.0	-57.95	6.30	13.75	Horizontal	-52.65	-13.00	39.65	90
9	7528.5	-53.01	6.80	13.85	Horizontal	-48.11	-13.00	35.11	45
10	8365.0	-54.88	6.90	14.25	Horizontal	-49.68	-13.00	36.68	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

Main Test Instruments

Date of Testing (variant): August 24, 2021 ~ November 25, 2021

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113824	2021-05-15	2022-05-14
Climate Chamber	Weiss	VT4002	58226119450010	2021-05-15	2022-05-14
Spectrum Analyzer	Key sight	N9020	MY52330084	2021-05-15	2022-05-14
Signal Analyzer	R&S	FSV3030	101411	2020-12-13	2021-12-12
Signal Analyzer	R&S	FSV30	100815	2020-12-13	2021-12-12
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	01111	2019--9-12	2022-09-11
Horn Antenna	Schwarzbeck	BBHA 9120D	1594	2020-12-17	2021-12-16
Software	R&S	EMC32	10.35.10	/	/